

**We Claim:**

1. A valve actuation linkage mechanism for use in an internal combustion engine comprising:  
a rocker arm having a pivot rod cup;  
a pivot rod; and  
a valve bridge having a pivot rod chamber.
2. The valve actuation linkage mechanism of Claim 1, further comprising a pivot rod retainer.
3. The valve actuation linkage mechanism of Claim 2, wherein the pivot rod retainer comprises:  
a pivot rod orifice having at least one pivot rod prong; and  
at least one securing orifice.
4. The valve actuation linkage mechanism of Claim 2, wherein the valve bridge further comprises:  
a middle valve bridge section having the pivot rod chamber and at least one adjacent pivot rod retainer securing bore; and  
a bottom valve bridge section.
5. The valve actuation linkage mechanism of Claim 1, wherein the pivot rod chamber further comprises a lubricant dimple.

6. The valve actuation linkage mechanism of Claim 2, wherein the pivot rod comprises:
  - a pivot rod head;
  - a pivot rod neck;
  - a pivot rod body; and
  - a pivot rod bottom.
7. The valve actuation linkage mechanism of Claim 1, wherein the pivot rod and pivot rod chamber cooperate to form a contact line.
8. A valve actuation linkage mechanism for use in an internal combustion engine comprising:
  - a rocker arm having a pivot rod cup;
  - a pivot rod;
  - a pivot rod retainer; and
  - a valve bridge having a pivot rod chamber.
9. The valve actuation linkage mechanism of Claim 8, wherein the pivot rod retainer comprises:
  - a pivot rod orifice having at least one pivot rod prong; and
  - at least one securing orifice.

10. The valve actuation linkage mechanism of Claim 8, wherein the valve bridge further comprises:

- a middle valve bridge section having the pivot rod chamber and at least one adjacent pivot rod retainer securing bore; and
- a bottom valve bridge section.

11. The valve actuation linkage mechanism of Claim 8, wherein the pivot rod comprises:

- a pivot rod head;
- a pivot rod neck;
- a pivot rod body; and
- a pivot rod bottom.

12. The valve actuation linkage mechanism of Claim 8, wherein the pivot rod chamber further comprises a lubricant dimple.

13. The valve actuation linkage mechanism of Claim 8, wherein the pivot rod and pivot rod chamber cooperate to form a contact line.

14. A valve actuation linkage mechanism for use in an internal combustion engine comprising:

- a pivot rod;
- a pivot rod retainer;
- a valve bridge having a pivot rod chamber; and
- at least one fastener able to secure the pivot rod retainer to the valve bridge.

15. The valve actuation linkage mechanism of Claim 14, wherein the pivot rod retainer comprises:

- a pivot rod orifice having at least one pivot rod prong; and
- at least one securing orifice.

16. The valve actuation linkage mechanism of Claim 14, wherein the valve bridge further comprises:

- a middle valve bridge section the pivot rod chamber and at least one adjacent pivot rod retainer securing bore; and
- a bottom valve bridge section .

17. The valve actuation linkage mechanism of Claim 14, wherein the pivot rod chamber further comprises a lubricant dimple.

18. The valve actuation linkage mechanism of Claim 14, wherein the pivot rod comprises:

- a pivot rod head;
- a pivot rod neck;
- a pivot rod body; and
- a pivot rod bottom.

19. The valve actuation linkage mechanism of Claim 14, wherein the pivot rod and pivot rod chamber cooperate to form a contact line.